

Remarks

Claims 1-14 are currently pending n the application.

The Abstract stands objected to for length (over 150 words) and other reasons. It is respectfully submitted that the new abstract comprising 144 words meets and overcomes this objection.

The claims as filed stand objected to for a variety of informalities and rejected under 35 U.S.C. 112, second paragraph as indefinite for failing to particularly point out and distinctly claim the subject matter the Applicant regards as the invention. It is respectfully submitted that the amendments to the claims deleting claims 1-14 as originally filed and substituting new claims 15-22 meet and overcome all of these objections and grounds for rejection.

Claims 1-14 stand rejected under 35 U.S.C. 103(b) as unpatentable over various combinations of the teachings of U.S. Patent No. 4,533,208 to Stowe, U.S. Patent No. 4,493,528 to Shaw et al. and U.S. Pre Grant Publication number 2003/0123804 to Nikinov. It is respectfully submitted that the claims as currently presented meet and overcome all of these prior art based obviousness rejections.

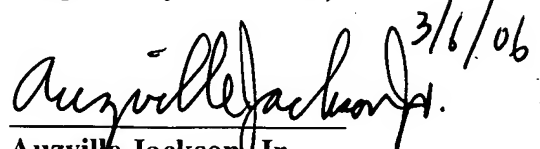
As currently presented/claimed, the electronic device of the present invention comprises an evanescent optically coupled electronic device comprising: a

backplane wave guide or mother board comprising a set of parallel carriers that define a first plurality of parallel channels and include a first array of optical fibers having exposed cores in the first plurality of parallel channels; at least one electronic card or daughter board including a high speed optical waveguide bus; a flexible fiber ribbon or film including waveguides comprising individual optical fibers of locally increased refractive index joined by a web of suitable material forming the high speed optical waveguide bus and optically connecting the backplane waveguide and said at least one electronic card with no 90° angle turns; and a mechanism for retaining the first array of optical fibers having exposed cores in abutting and facing evanescent optical contact with the individual optical fibers in said flexible fiber or ribbon. It is respectfully submitted that none of the cited references taken alone or in combination teach the use of a flexible fiber ribbon or film including waveguides comprising individual optical fibers of locally increased refractive index joined by a web of suitable material forming the high speed optical waveguide bus and optically connecting the backplane waveguide and said at least one electronic card with no 90° angle turns. While the apparatus used to optically couple the flexible ribbon or fiber to the backplane waveguide may be similar to those described in the prior art, none of these references teach the essential use of a flexible fiber ribbon or film that serves to connect the backplane waveguide to the electronic or daughter board as described in the application and shown specifically in Figure 6 thereof.

The configuration currently claimed presents numerous advantages over the teachings of the prior art references. These include: 1) the ability to tap optical signal power from the backplane waveguide to card waveguide or vise versa when the card is plugged into the backplane with 90 degree or other appropriate angular orientations; (2) the ability to connect several daughter boards or electronic cards to the mother board or backplane waveguide simultaneously, i.e. cascaded (see Fig. 6); and (3) the waveguide (array) can be of any suitable material including polymeric waveguides due to low fabrication cost, while both Stowe's and Shaw's patents only teach glass fibers which are just one special case of our method and also not the optimal one. These advantages are not possible using the configurations of the cited prior art.

In view of the foregoing amendments to the claims and the remarks presented hereinabove, it is respectfully submitted that claims 15-22 as currently presented stand in condition for allowance and the same is most earnestly solicited at an early date.

Respectfully submitted,


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